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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/771,698 | 02/03/2004 | Ozgur C. Leonard | 33227/467001 | 3805 |

32615 7590 09/16/2009

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| EXAMINER | |
|---|---|
| WAI, ERIC CHARLES | |
| ART UNIT | PAPER NUMBER |
| 2195 | |

| NOTIFICATION DATE | DELIVERY MODE |
|---|---|
| 09/16/2009 | ELECTRONIC |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/771,698 | LEONARD ET AL. | |
| | Examiner | Art Unit | |
| | ERIC C. WAI | 2195 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *05 August 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

1. Claims 1-24 are presented for examination.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger et al. (US PG Pub No. US 2003/0014466 A1), in view of McMillan et al. (US PG Pub No. US 2005/0076326 A1), in view of Armstrong et al. (US PG Pub No. US 2002/0156824 A1), further in view of Karp et al. (US Pat No. 7,032,222).

4. Armstrong was disclosed in IDS date 10/03/2005. Berger was disclosed in IDS dated 09/18/2007.

5. Regarding claim 1, Berger teaches a machine-implemented method, comprising:

establishing, within a global operating system environment provided by an operating system, a non-global partition which serves to isolate processes running within the non-global partition from at least one other non-global partitions within the global operating system environment, wherein each of the non-global operating system partitions do not each have a separate operating system kernel executing therein

([0035] lines 9-14, wherein an operating system sets up logically protected computing environments or compartments).

6. Berger does not explicitly teach that each of the non-global partitions comprises a distinct file system. McMillan teaches the use of separate file systems for each of a semi-independent virtual OS environments operating within the scope of a main operating system ([0008]). It would have been obvious to one of ordinary skill in the art at the time of the invention to try to modify Berger to explicitly teach a separate file system for each partition. One would be motivated by the desire to provide better isolation from each of the other environments as taught by McMillan.

7. Berger does not teach associating a resource limit with the non-global partition wherein the first resource limit indicates a maximum amount of a particular resource that can be allocated to the non-global partition.

8. Armstrong teaches the use of processor resource pools in logically partitioned system ([0011-0013]). Each capped partition is constrained to utilize no more than the specified processing capability allocated to the partition ([0013]). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Berger to include processor resource pools. Since Berger only discloses methods to assign network resources, one would be motivated by the desire to include a way of assigning each compartment in Berger to a processor resource pool.

9. Berger, McMillan, and Armstrong do not explicitly teach associating a second resource limit with a first group of processes within the non-global partition, wherein the second resource limit indicates a maximum amount of the particular resource that can be allocated to the first group of processes; and associating a third resource limit with a second group of processes within the non-global partition, wherein the third resource limit indicates a maximum amount of the particular resource that can be allocated to the second group of processes.

10. Karp teaches a flexible allocation of resources to users which utilizes multiple resource limits. Karp teaches a high watermark limit which is the maximum amount of resources available (col 3 lines 45-46) and hard limits that are assigned to each user wherein each user can have multiple tasks (col 3 line 63 to col 4 line 22).

11. It would have been obvious to one of ordinary skill in the art to modify Berger and Armstrong to set resource limits on multiple groups of processes running within the non-global partition such as taught by Karp. One would be motivated by the desire to share the resources among the various tasks within each partition and prohibit any one task from blocking other tasks from executing.

12. Regarding claim 2, Armstrong teaches that a global partition administrator sets the first resource limit ([0025]).

13. Regarding claim 3, Armstrong teaches that a non-global partition administrator sets the second resource limit ([0036]).

14. Regarding claim 4, Armstrong teaches: receiving a resource allocation request for the particular resource from a process executing in the group of processes; determining an amount of the particular resource that can be allocated; and allocating the determined amount to the group of processes ([0035], wherein it is inherent that processes running under an operating system request resources, and operating systems allocate the resources accordingly).

15. Regarding claim 5, Berger, McMillan, Armstrong, and Karp do not explicitly teach: calculating an available amount of the particular resource, and wherein if the resource allocation request is less than or equal to the available amount, then the determined amount is set to the amount of the resource allocation request.

16. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to set the determined amount to the amount of the resource allocation request. It is old and well known to allocate resources if such resources are sufficiently available.

17. Regarding claim 6, Berger, McMillan, Armstrong, and Karp do not explicitly teach wherein if the resource allocation request is greater than the available amount, then the determined amount is set to the available amount.

18. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to set the determined amount to the available amount. It is old and well known to allocate resources to an amount that is available.

19. Regarding claim 7, Berger, McMillan, Armstrong, and Karp do not teach wherein if the resource allocation request is greater than the available amount, then the determined amount is set to zero.

20. It would have been obvious to one of ordinary skill in the art at the time of the invention to set the determined amount to zero. It is old and well known the deny requests if such requests cannot be completely fulfilled. One would be motivated by the desire to allocate zero resources to the requester is the request could not be completely fulfilled.

21. Regarding claim 8, Berger, McMillan, Armstrong, and Karp do not teach wherein calculating further comprises: calculating a first amount by subtracting the total amount of the particular resource allocated to the non-global partition from the first resource limit; calculating a second amount by subtracting the total amount of the particular resource allocated to the group of processes from the second resource limit; and setting the available amount to the lower of the first amount and the second amount.

22. It is well known in the art to subtract the amount consumed from the total amount to realize the amount available. Therefore, it would have been obvious to one of

ordinary skill in the art at the time of the invention to calculate an available amount using this method and choosing the lesser of the amounts to determine the amount available.

23. Regarding claims 9-24 they are the machine-readable medium and apparatus claims of claims 1-8 above. Therefore they are rejected for the same reasons as claims 1-8 above.

### *Response to Arguments*

24. Applicant's arguments with respect to claims 1-24 have been considered but are moot in view of the new ground(s) of rejection.

### *Conclusion*

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric C. Wai whose telephone number is 571-270-1012. The examiner can normally be reached on Mon-Thurs, 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng - Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Meng-Ai An/
Supervisory Patent Examiner, Art Unit 2195

/Eric C Wai/
Examiner, Art Unit 2195